Quality Control

											DQA:	Date:	
NCR:	⁄es	/ No				WORK ORDER NON-C	100	VFOR	MANCE / UF	PDATE			
	÷										QA Closed:	Date:	
Work Orde	o ř·					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
WOIK OIG	٠٠.					Rework	1		Skid-tube	Crosstube	1	Water Jet	Engineering
Part f	No.					Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	Quality
	•					Use-as-is			noforming	Finishing	-	re/Packaging	Other
NCR I	No.					Work Order Update			Large Fab	Composite]	Supplier	
Root	-				Descri	ption of work order update	<u> </u>	Initial	Ac	ction	Sign &		
Cause		Date	Step	Qty		or Non-conformance	1	ief Eng		cription	Date	Verification	QC Inspector
Doc/Qata			<u> </u>										-
Equip/Tooling						· · · · · · · · · · · · · · · · · · ·							
Operator						. 	l		٠				
Material													·
Setup							Ì						
Other						•							
Process	Ш					:							
Supplier					ح صر						,		
Training						n /							
Unapproved				<u> </u>									
			 				AUL	T CATE	GORY				
Landi	_	1				General		1			7		1_ ,_ ,
		Bending			_ <u> </u>	Bend	<u> </u>	Grain		,	Ovalized		Pressure/Forced
		Centre No	ot Concei	ntric to	^{0/S} -	BOM/Route		Hardwa		· • •	Over/Under		Temperature/Cure
	\vdash	Cracks	C		_	Broken/Damaged	<u> </u>	4	on incomplete	, <u> </u>	Part Incorred	 	Weld
	-	Crushed/	Crimped		<u> </u>	Burrs	-	4	ions Incomplete,	/Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled
	\vdash	Cuffs			<u> </u>	Countarial	\vdash	Mainte		<u> </u>	Part Moved		
	\vdash	Heat Trea		T. da		Countersink	\vdash	Mislabe			Positioned V		loste a r
	L	Inspectio	n strip in	eauı		Cut Too Short		Misread	J	I	Power Loss/	ourge	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Folio

Work Order ID 107450 *107*4*50* . September-24-13 1:16:27 PM Item ID: D2322 Accept *N900040100* **Revision ID:** Step Spacer Item Name: **Start Qty: 23.00 Start Date:** 9/24/13 **Cust Item ID:** Req'd Qty: 23.00 Required Date: 10/08/13 **Customer:** Reference: Tooling: Date: Date: ____ Process Plan: Approvals: Stop QC: _____ Date: ____ SPC (Y/N): Date: Reject Reject Tool ID Tool # Plan Sequence ID/ Operation Set Up/ Accept Number Stamp Qty Work Center ID Description Run Hours Code Qty 130 0.00 NC BRAKE *130* Brake NC 0.00 Memo Brake NC Form as per Dwg D2322

140

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

150

140

Chemical Conversion Coat per QSI005 4.1 0.00

150 HandFinish Hand Finishing

Memo

0.00

28 7813.103

Page 2

Insp.

										DQA	Date:	
NCR: Y	res / No				WORK ORDER NON-	COI	NFORN	MANCE / UP	DATE	OA Closed	Data	
			_		<u> </u>		T			QA Closed	: Date	
Work Orde	er:				DISPOSITION				AGAINST D	EPARTMENT	/PROCESS	
Part No. NCR No.					Scrap Machining Small Fab. Use-as-is Thermoforming Finishing			Crosstube Small Fab Finishing Composite	Pro Rec/Sto	Engineering Quality Other		
Root				Descri	ption of work order update	T	Initial	Ac	tion	Sign &		
Cause	Date	Step	Qty	,	or Non-conformance	Ct	nief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved												
		 -			 	AUI	LT CATE	GORY				
Landir [ng Gear				General		16:.		F	٦, ,,	_	٦. /-
	Cracks Crushed Cuffs	Not Conce /Crimped		o/s	Bend BOM/Route Broken/Damaged Burrs Contamination		Instructi Mainte	on Incomplete ons Incomplete/I nance	Unclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved	issing	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled
	Heat Tre Inspecti	eat on Strip in	Tube		Countersink Cut Too Short	-	Mislabe Misread		-	Positioned \ Power Loss,	· -	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Folio

Work Ord September-24-				*107450*							P		
Item ID: Revision ID:	D2322			Accept	*N900	040	100)*	Setup	Start Stop		S1*	
Item Name: Start Date: Required Date Reference:	Step Spacer 9/24/13 e: 10/08/13	Start Qty: 23.00 Req'd Qty: 23.00	*23* *23*		Cust Item I Customer:	D:					*N:	S2*	
Approvals:	Process Pl	an:	Date:	Tooling:	Da	ite:			Run	Start	*N	R1*	
	QC:		Date:			ıte:				Stop	*N	R2*	
Sequence ID/ Work Center	ID	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accep Qty	t Re Qt		Reject Number	Insp. Stamp	
*160 *160* QC Quality Control		QC7-Inspect Chemical C Memo	onversion Coat	0.00		•		28		f		13·10.	
170		Identify as per dwg & Sto	ck Location:	0.00				28				PL.	
170 Packaging		Мето		0.00							· /	אבאבואן	

QC21- Final Inspection - Work Order Release 0.00 0.00 Memo

Packaging

120

Quality Control

180

Rm 13/10/18.
NF 13-10-17

NICD.	Voc	1	No
NCR:	Yes	/	No

WORK ORDER NON-CONFORMANCE / UPDATE

	DQA:	Date:	3 • • • • • • • • • • • • • • • • • • •
	QA Cioseu.	Date.	· · · · · · · · · · · · · · · · · · ·
DEF	PARTMENT	/PROCESS	
		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
	Sign &		
	Date	Verification	QC Inspector

											QA Closed:	Date	
Work Orde	er: _			_		DISPOSITION				_	EPARTMENT		
Part No. NCR No.						Rework Scrap Use-as-is Work Order Update		Skid-tube Crosstube Machining Small Fab Thermoforming Finishing Large Fab Composite				Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root Cause		Date	Step	Qty		ption of work order update or Non-conformance		itial ef Eng		ction cription	Sign & Date	Verification	QC Inspector
	\Box	Dute	эсер	Qty	`	or won comormance	Cin	CI LIIE	Desc	cription	Dute	Vermedion	QC mapeetor
Doc/Data Equip/Tooling													
Operator	Н	•									ļ	:	
Material	Н						Ì						
Setup	Ш												
Other	<u> </u>			1									
Process	Ш										ļ .		
Supplier	Ш												
Training	Н												
Unapproved				L			<u> </u>	CATE				<u> </u>	
						· · · · · · · · · · · · · · · · · · ·	AULI	CATE	GORY				
Landi	$\overline{}$					General				Г	٦	Γ	٦, ،
	-	Bending	_		_	Bend	\vdash	Grain		-	Ovalized	 	Pressure/Forced
	-	Centre No	ot Concei	ntric to	O/S	BOM/Route	-	Hardwa		<u> </u>	Over/Under		Temperature/Cure
	-	Cracks			-	Broken/Damaged		-	on Incomplete	,, , <u> </u>	Part Incorre	<u> </u>	Weld
1	-	Crushed/0	Crimped		-	Burrs	\mathbf{H}		ions Incomplete	/Unclear	Part Lost/M		Wrong Stock Pulled
	\vdash	Cuffs			-	Contamination	\mathbf{H}		nance	ļ	Part Moved		
	н	Heat Trea			<u> </u>	Countersink	\vdash	Mislabe		<u> </u>	Positioned V		7
	-	Inspection	-	Tube	ļ	Cut Too Short		Misread	I	L	Power Loss/	Surge	Other
	-	Ripples in			<u> </u>	Drill Holes	-	Offset				<u></u>	
	Ш	Torque W			n	Drawing	$\boldsymbol{\vdash}$		Calibration				
	Ш	Turning S	-		<u> </u>	Finish	\vdash		Sequence				
Wave/Twist in Tube					Folio		Outside	Dimensions					

Work Order ID: 107450

107450

Parent Item:

D2322

Parent Item Name: Step Spacer

Start Date: 9/24/13

Required Date: 10/08/13

Start Qty: 23.00

Required Qty: 23.00

Comments:

IPP Rev:A New Issue 05-11-07 JLM

IPP Rev;B Now on Waterjet 06-07-03 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch		Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.040		Purchased	No			100	sf	271.4417	0.203	4 .91473 7	7		
M2024T3 2024-T3 .040 sheet	RS 040								**	6.5	5	Jn	13.09-27

Location	Loc Oty	Loc Code	
MAT022	271.4416922		****
120605	65.8254832		
121197	57.187894		
122136	31.78		
123217	20.094315		
124987	96.554		124983

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORM	/IANCE / UPI	DATE		*************************************	
						1					QA Closed:	Date:	
Work Orde	er:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part No						Rework Scrap Use-as-is Work Order Update Skid-tube Crosstube Machining Small Fab Thermoforming Large Fab Composite			Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier		Engineering Quality Other		
Root				1	Descri	ption of work order update	Π	nitial	Act	tion	Sign &		
Cause	1	Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Descr	ription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved													
							AUL	T CATE	SORY	,			
Landi		Bending Centre No Cracks Crushed/C Cuffs Heat Trea Inspection Ripples in Torque W	Crimped t 1 Strip in Bend	Tube		General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		Instructi Mainte Mislabe Misread Offset	on Incomplete ions Incomplete/U nance led	Jnclear	Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	ssing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
I	1	rorque W	aves in t	xtrusio	rı	Drawing	1	Jour or C	alibration				

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish

Folio

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DART AEROSPACE LTD	Work Order:	OZYFOI
Description: Step Spacer	Part Number:	D2322
Inspection Dwg: D2322 Rev: C		Page 1 of 1

nspection Dwg	j: D2322 Re	v : C				Pa	ge 1 of 1
	FIRS	ST ARTICLE	INSPECT	TION CHI	ECKLIST		
		X First A	rticle [Prot	otype		
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection		nments
0.250	+/-0.005	0.254"	_		ν	JAmo	<u> </u>
4.178	+/-0.005	4.179"	_		ν		
4.428	+/-0.010	4.433"	_		V		
0.250	+/-0.005	0.254"	_		V		
6.520	+/-0.010	6.524"	-		ν		
Ø0.128	+0.005/-0.000	"PG1.0	_		V		
R0.125	+/-0.010	0.135	_		RG		
· · · · · · · · · · · · · · · · · · ·			DAS				
easured by:	Jm	Audited by	. 27 9-80		Prototype A	pproval:	N/A
Date:	13-09-27	Date		<i>?7</i> [Date:	N/A
Rev Date	Change New Issue	P/O D255	7.5			Revised by	Approve

Rev	Date	Change		Revised by	Approved
Α	04.10.12	New Issue	P/O D2582	KJ/JLM CX	
-					

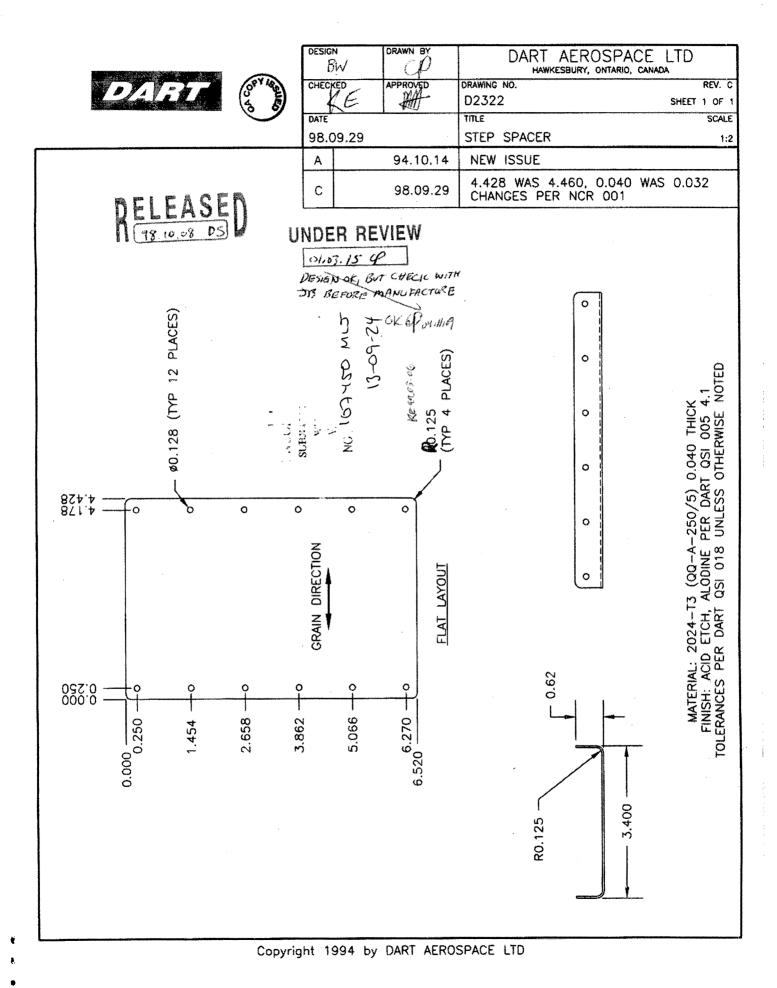
		DQA:	Date:	
CD: Voc / No	MODY ODDED NON CONFORMANCE / LIDDATE	•		

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

	•								QA Closed:	Dat	te:			
Work Orde	er:				DISPOSITION		AGAINST DEPARTMENT/PROCESS							
Part No					Rework Scrap Use-as-is Work Order Update	Ther	Skid-tube Crosstube Machining Small Fab rmoforming Finishing Large Fab Composite		Water Je Prod. Eng. Coor Rec/Store/Packaging Supplie		Engineering Quality Other			
Root				Descri	ption of work order update	Initial	A	ction	Sign &	1				
Cause	Date	Step	Qty	(or Non-conformance	Chief Eng	thief Eng Description		Date	Verification	QC Inspector			
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved														
Onapproved		<u> </u>			F	AULT CATE	LEGORY			L				
Landin	ng Gear				General						,			
	Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion Turning Sequence				Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing Finish	Instructure Maint Mislab Misrea Offset Out of	tion Incomplete tions Incomplete, enance eled	/Unclear	Ovalized Over/Under tolerance Part Incorrect Part Lost/Missing Part Moved Positioned Wrong Power Loss/Surge		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other			
	Wave/Twist in Tube Folio					Outsid	Outside Dimensions							

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- NCR: \	res / No)			WORK ORDER NON-	CON	NFORM	MANCE / UP	DATE		,	•		
\$ - A		·Ł						•		QA Closed:	Date:			
Work Order:					DISPOSITION				AGAINST DEPARTMENT/PROCESS					
Part No.				Rework Scrap	Skid-tube Crosstube Machining Small Fab			Pro	Water Jet d. Eng. Coor.	Engineering Quality				
NCR N	No				Use-as-is Work Order Update]	Thern	noforming Large Fab	Finishing Composite	Rec/Sto	re/Packaging Supplier	Other		
Root				Descri	ption of work order update	1	nitial	Ac	tion	Sign &	ages to			
Cause	Date	Step	Qty		or Non-conformance	Ch	nief Eng Description		Date	Verification	QC Inspector			
Doc/Data Equip/Tooling														
Operator						İ								
Material														
Setup											ei.			
Other		1												
Process											,* 5			
Supplier											,			
Training														
Unapproved										<u> </u>				
			-4		F	AUL	T CATE	GORY						
Landi	ng Gear				General					•		,		
	Bending ·				Bend	Ш	Grain			Ovalized	,	Pressure/Forced		
	Centre	Not Conce	ntric to (D/S	BOM/Route	Ш	Hardwa	Hardware		Over/Under	tolerance	Temperature/Cure		
	Cracks				Broken/Damaged	Ш	Inspection Incomplete			Part Incorre	ct	Weld		
	Crushed/Crimped				Burrs		Instructions incomplete/Unclear			Part Lost/Mi	issing	Wrong Stock Pulled		
	Cuffs				Contamination	Ш	Maintenance			Part Moved				
	Heat Treat				Countersink	Ш	Mislabeled			Positioned Wrong				
	Inspection Strip in Tube				Cut Too Short		Misread			Power Loss/	Surge	Other		
	Ripples in Bend				Drill Holes		Offset							
	Torque Waves in Extrusion			າ [_	Drawing		Out of 0	Calibration						
	Turning Sequence				Finish		Out_of S	Sequence						
	Wave/Twist in Tube				Folio	Outside Dimensions								

DQA:

Date:

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